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# Grounding Contributions and Community Engagements in Your Business Goals

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JOHAN LINÅKER, PH.D., OPEN SOURCE SUMMIT EU, 2019-10-30



# About Johan

- Current focus – Helping public sector organizations build ecosystems with platforms of open data & software
- PhD Thesis – This presentation
- Openhack – Platform for social innovation and digital volunteerism using open source.
- Hack for Sweden – Swedish Government initiative to drive the creation of open and data-driven innovation.



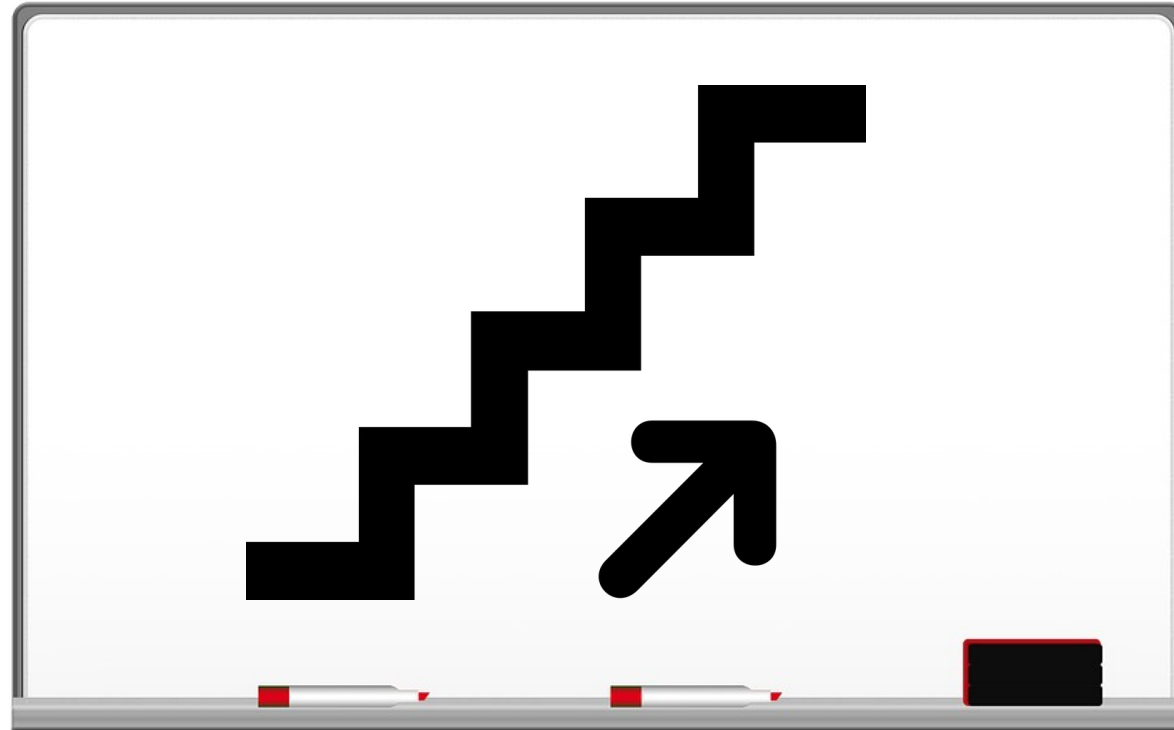
# Why Open Source?

Management/  
C-suite

Dev. org.



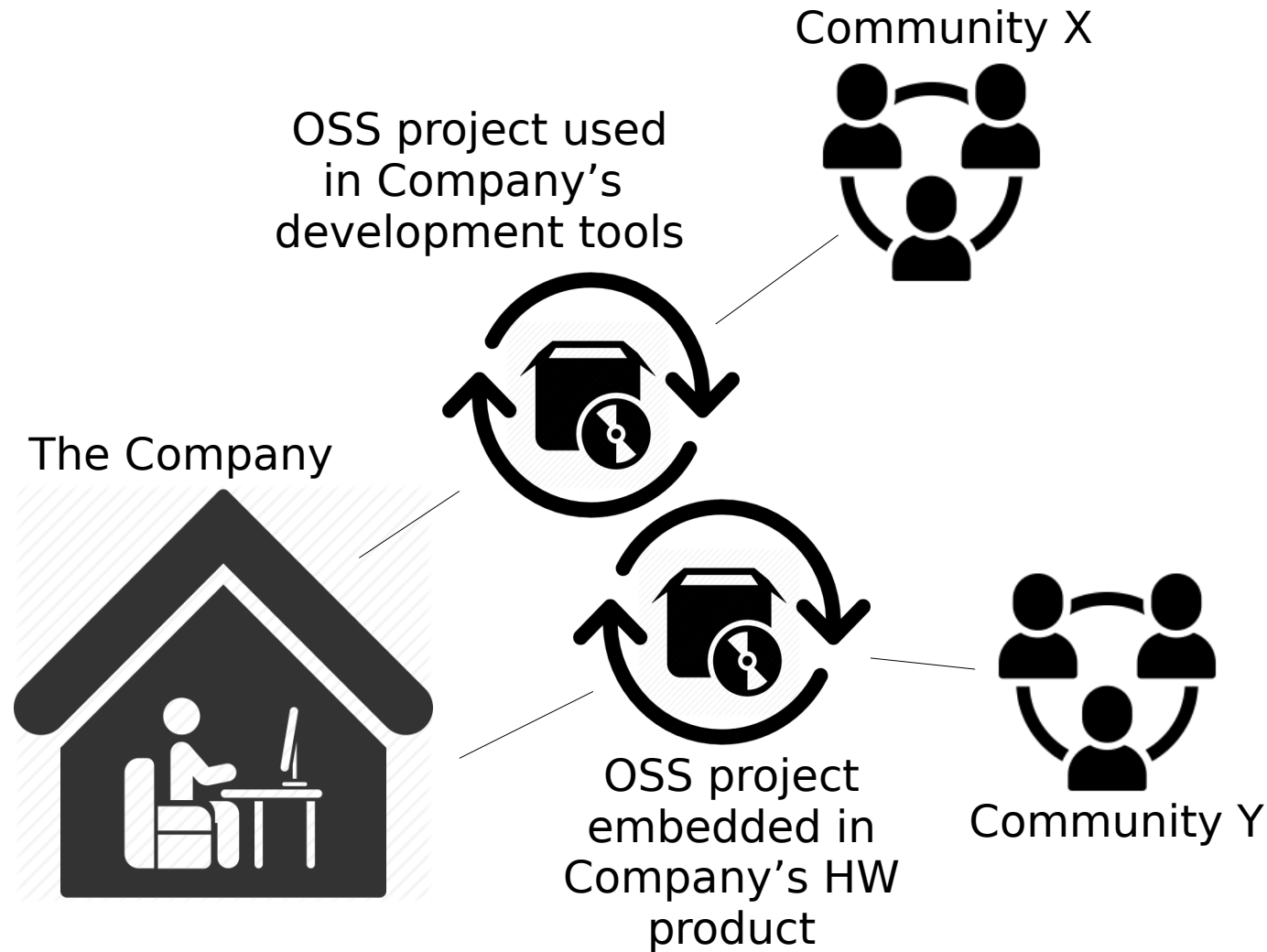
# A Maturity Process



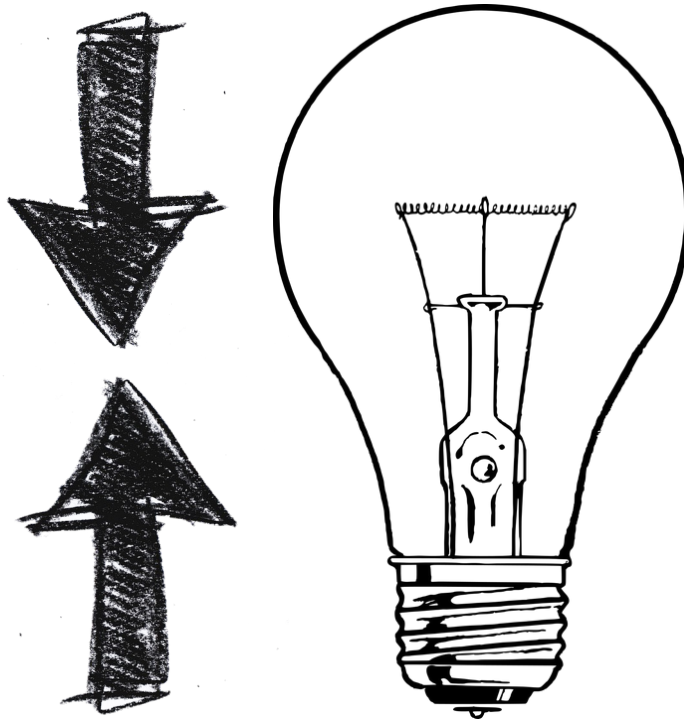
# Company X



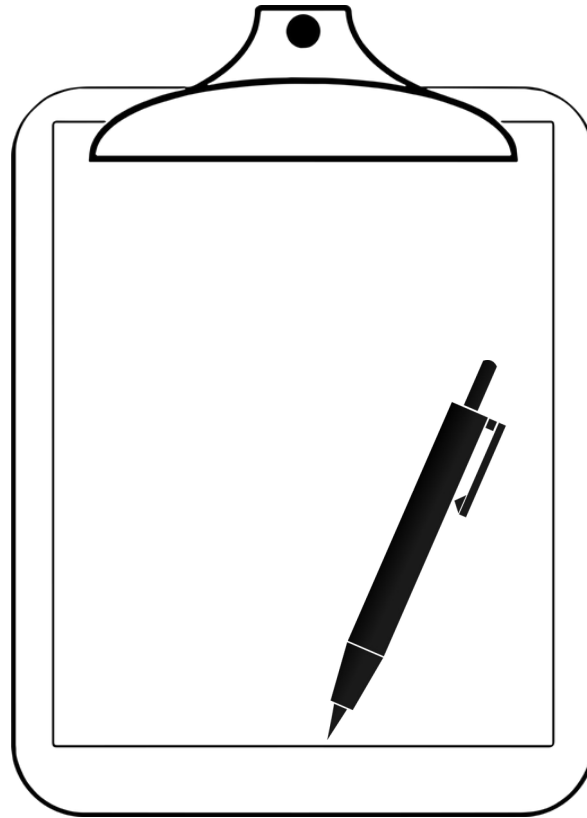
# Open Source Used and Integrated



# Top-down $\gg$ Bottom-up



# Inventory

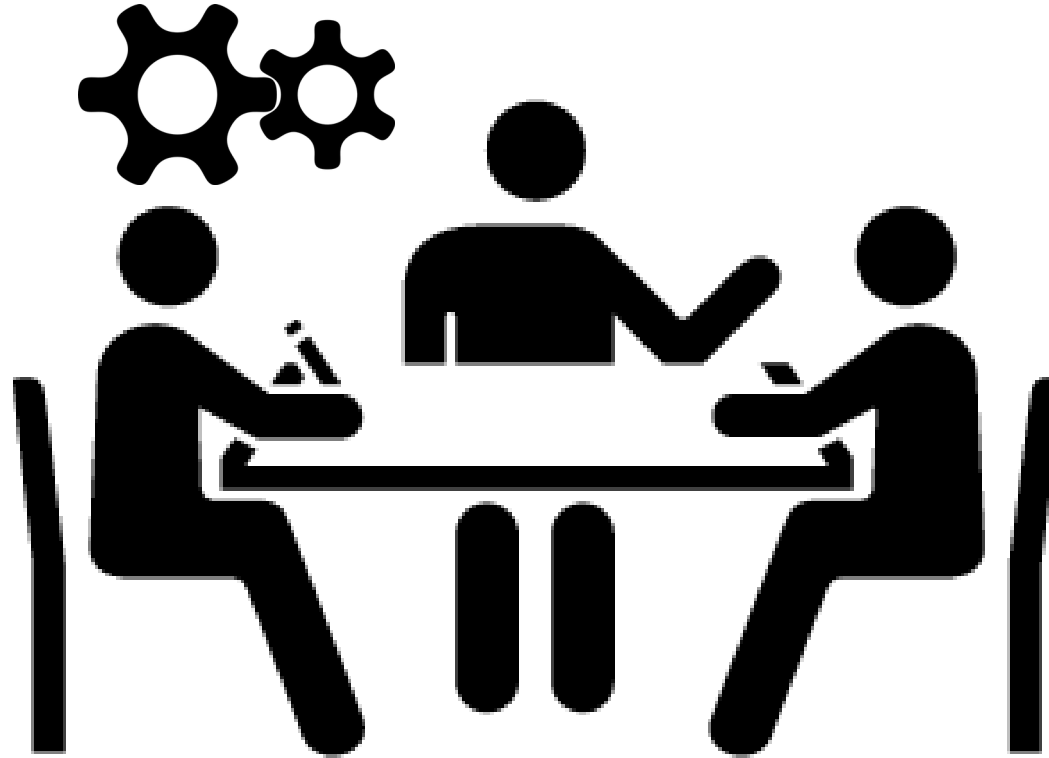




# An Open Source Program is Born



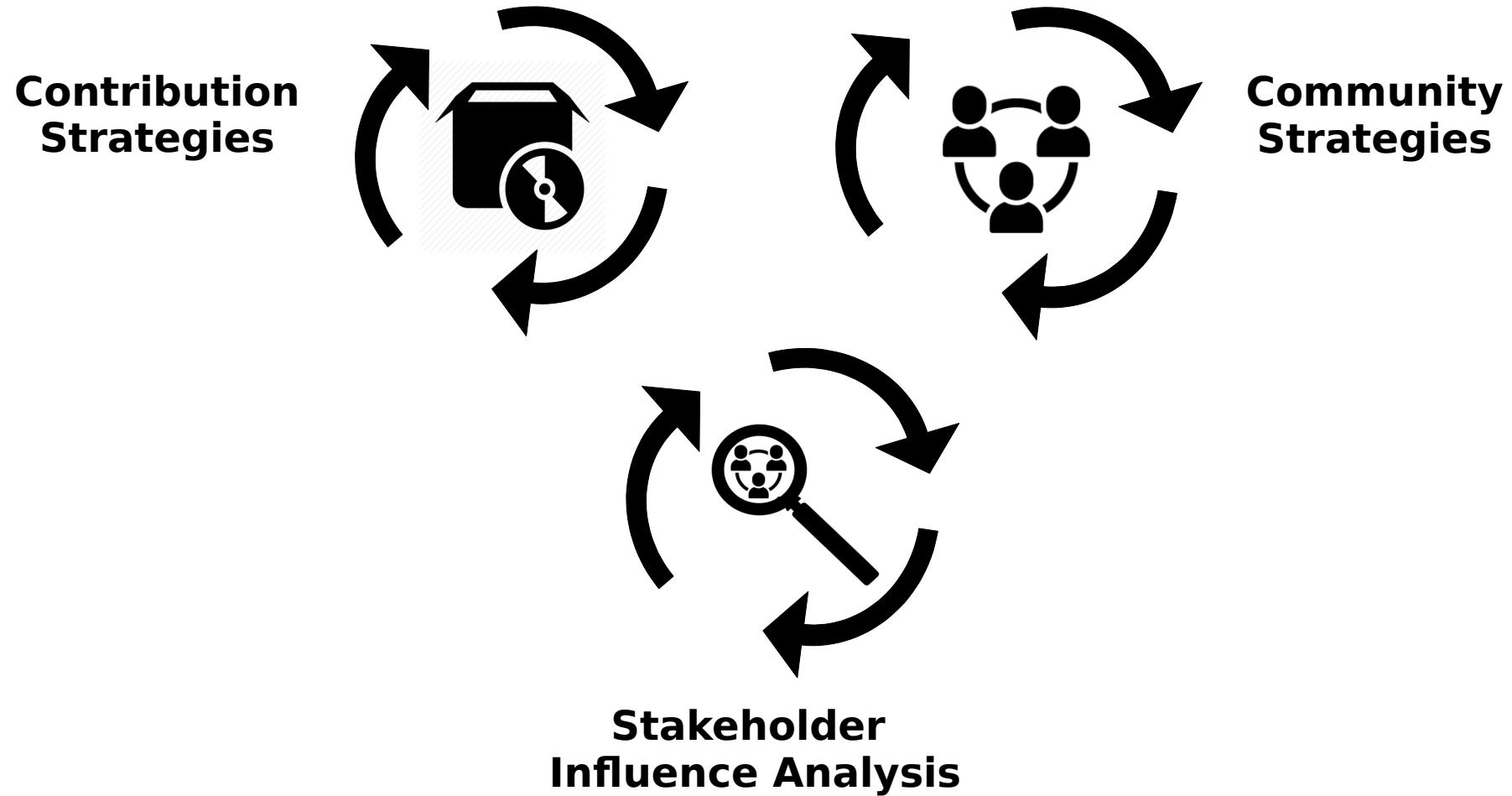
# Process Development



→ Focus of my PhD



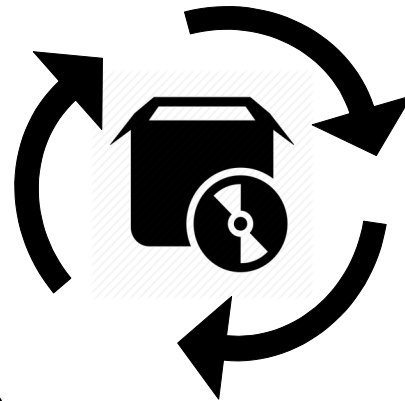
# Interactive and Iterative 3-way Approach



# Contribution Strategies

## What?

- Everything or certain parts?



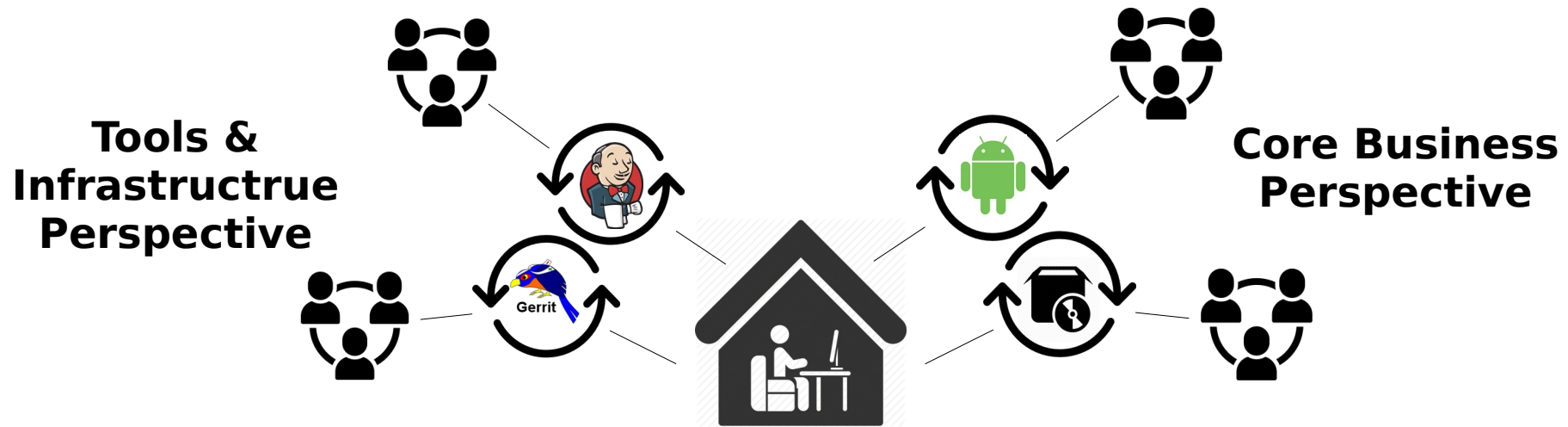
## When?

- Now or possibly later?

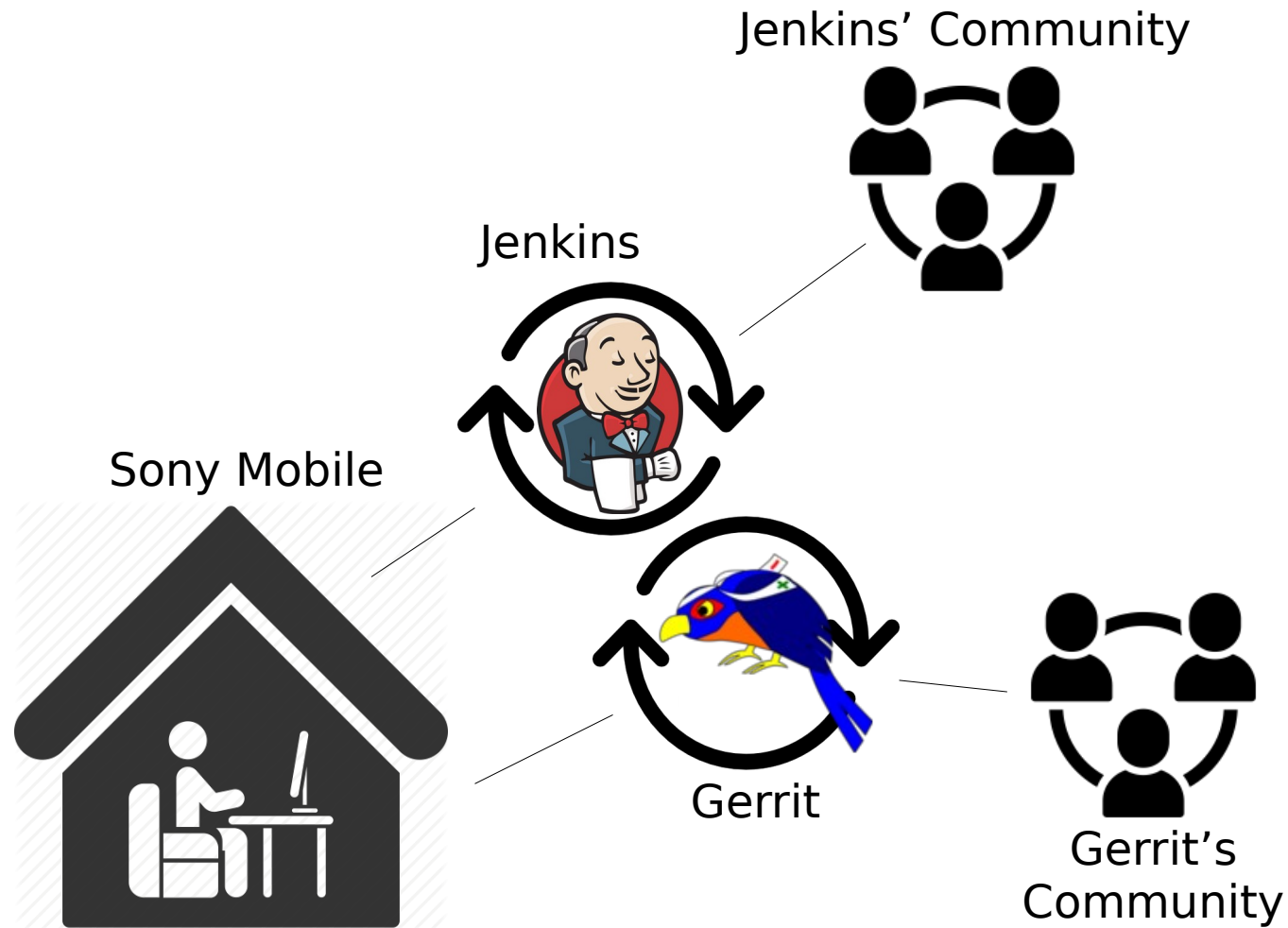
## Where?

- To an existing or new community?

# Case Studies @ Sony Mobile

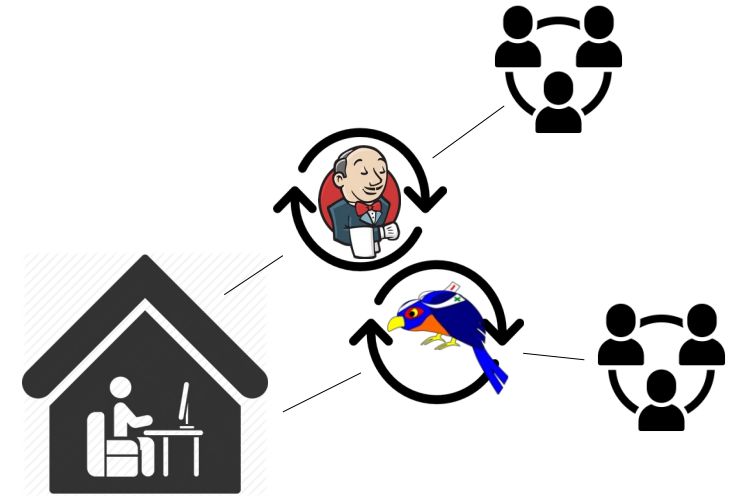


# Tools and Infrastructure perspective



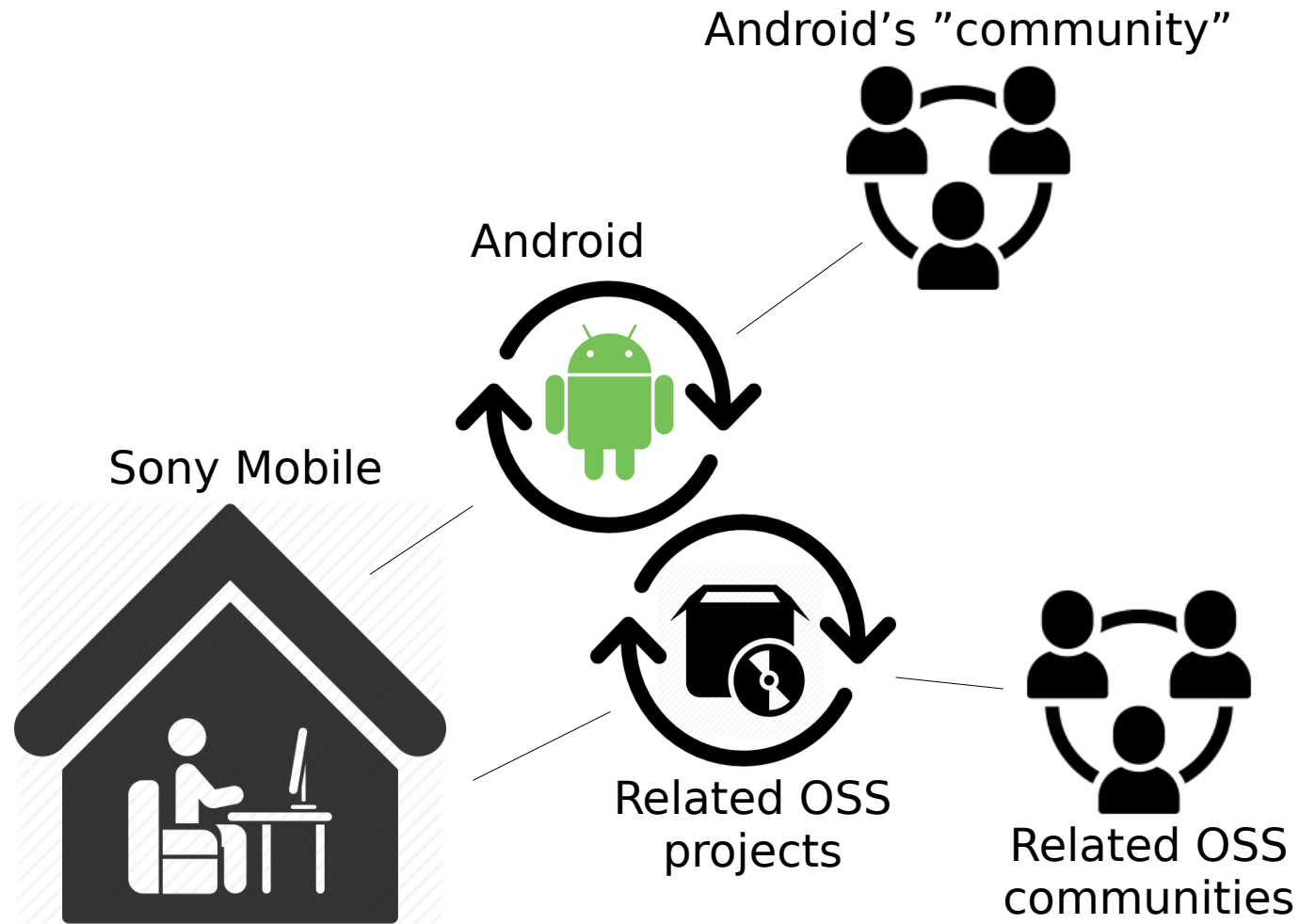
# Tools and Infrastructure perspective

- Important to build influence in OSS communities
- Contribute back if deemed non-competitive
- Benefits include
  - Shared maintenance and freed up time
  - Product and process innovation





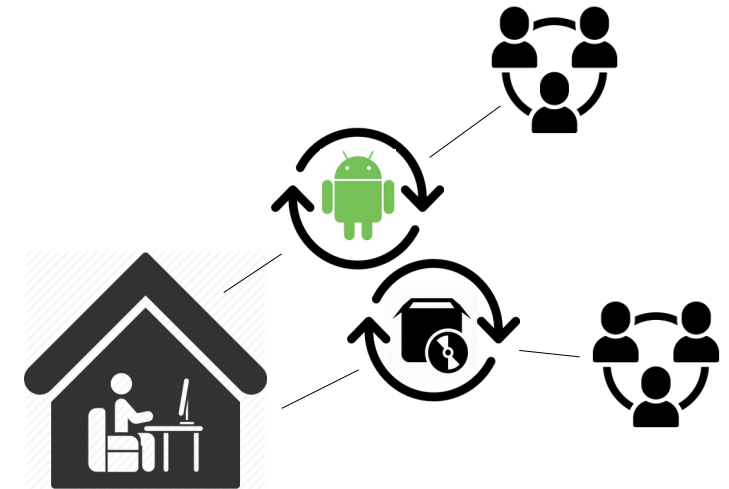
# Core Business perspective



# Contribution Acceptance Process



- Structured approach to do contribution strategies
- Proactive use in the product planning process
- Reactive use when responding to contribution requests

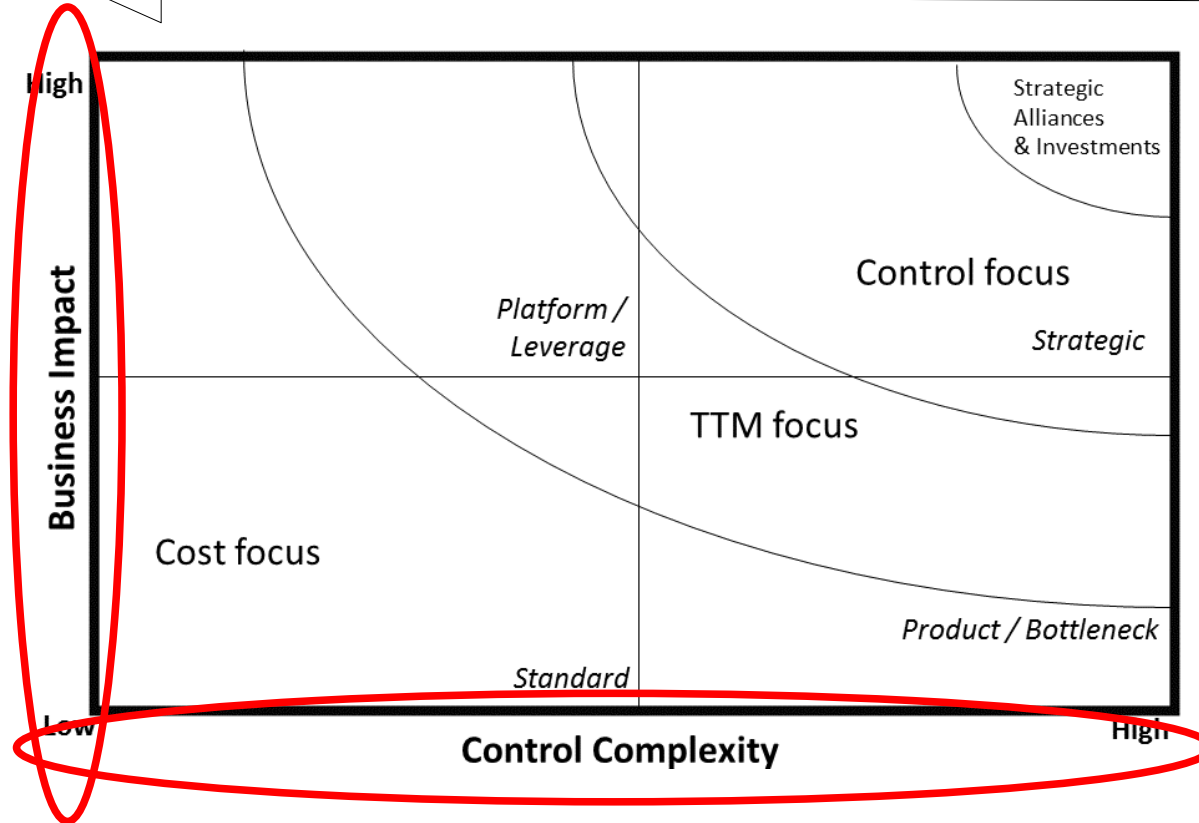


# Contribution Acceptance Process

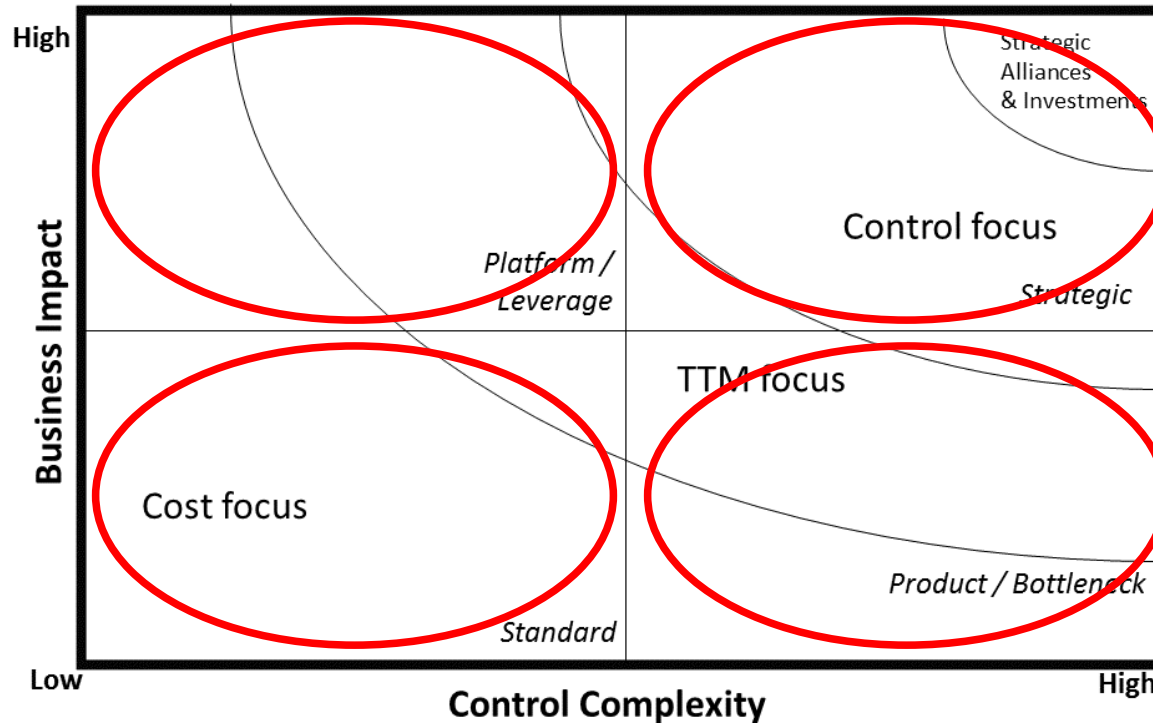


- Scope: Portfolio, Product, Release...
- Abstraction: Components, Features...

# Contribution Acceptance Process



# Contribution Acceptance Process

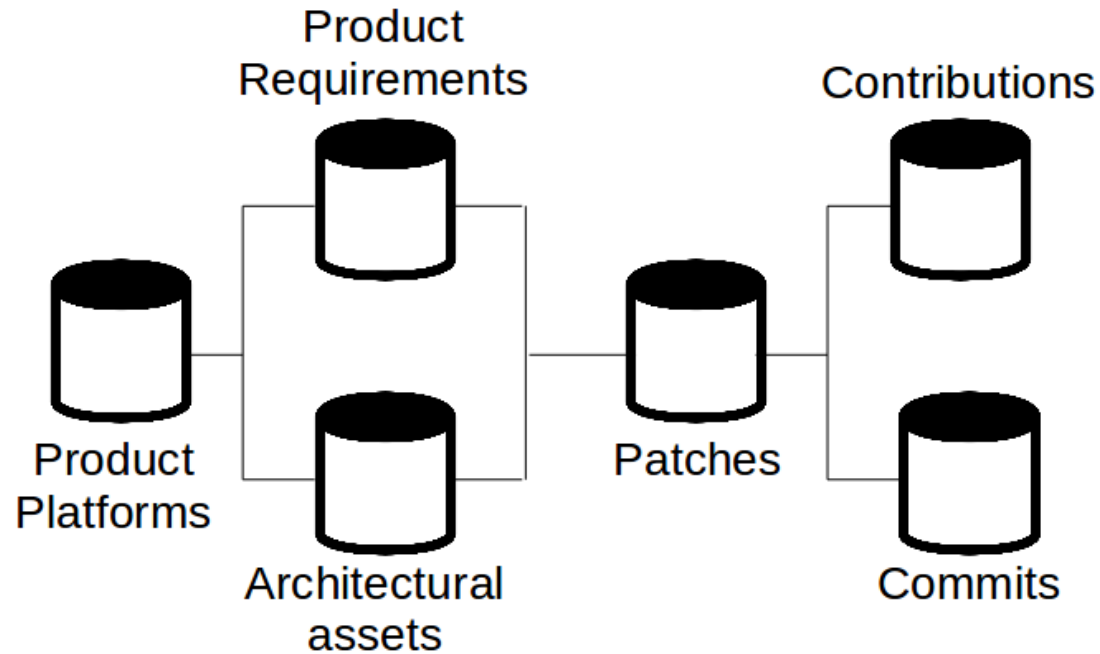


# Contribution Acceptance Process



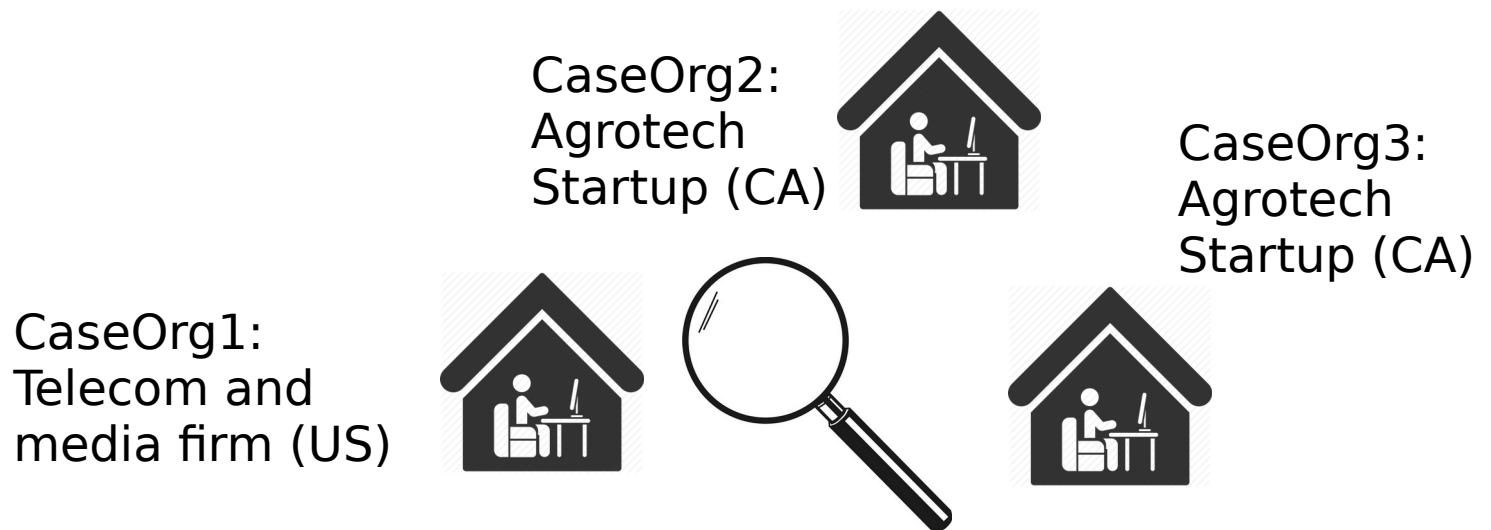
- What are the drivers that should be considered for the specific community? E.g.,
  - Reduce cost and share maintenance
  - Contribute fast to avoid adapting to competitors
  - Gain influence and control in community
- Does the Community engagement need to be adapted?

# Contribution Acceptance Process



# External Validation

- Good foundation for discussion and decision-making
- In need of being tailored to the context
- Future work should consider influence on an OSS community's development process, and what other stakeholders that are present





# Three New Case Studies

CaseOrg1:  
Telecom and  
media firm (US)



CaseOrg2: HW &  
Embedded SW firm  
(EU)



CaseOrg3: Swedish  
Public Employment  
Service

# Contribution Management framework

**Contribution objectives**



**Contribution complexities**

- **Contribution objectives** explicate different types of benefits that may be gained as a consequence of a contribution
- **Contribution complexities** exemplify aspects that may complicate the contribution, or in other ways imply cost or risk for the organization
- **Basis** for designing **Contribution Strategy guidelines** and related contribution process

# Contribution Objectives

- 13 Contribution Objectives identified
- For example...
  - Create a standard solution, build a software ecosystem, or create price pressure
  - Improve reputation towards customers, partners, potential employees and the public
  - Increase innovation and reduce costs



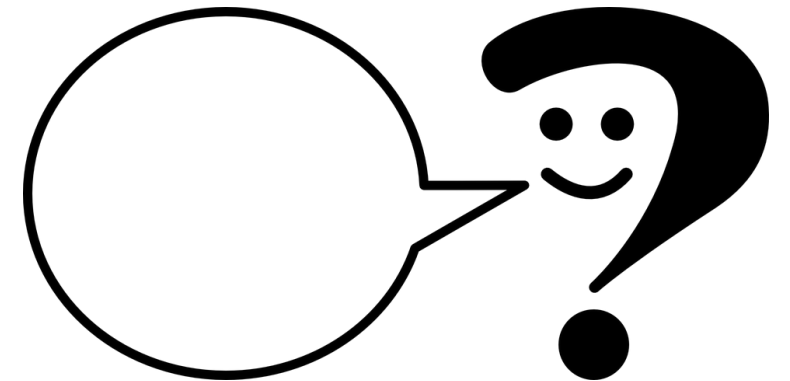
# Contribution Complexities

- 16 Contribution Complexities identified
- For example...
  - Impact on value proposition and internal operations?
  - Differentiating functionality or sensitive intellectual property rights?
  - Cost and technical feasibility of contribution?
  - External interest and influence needed?



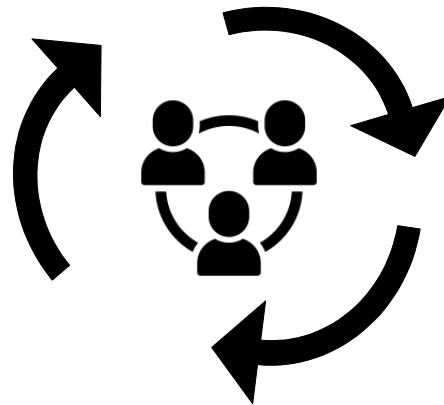
# Asking the right questions

- Example questions for Contribution objectives and complexities
- Questions gathered from contribution guidelines of seven organizations
- Considers e.g., goals and intention, functionality, size and complexity, Internal dependencies, origin of source code, alternatives, business rationale, novelty and competitive edge, license and obligations...



# Community Strategies

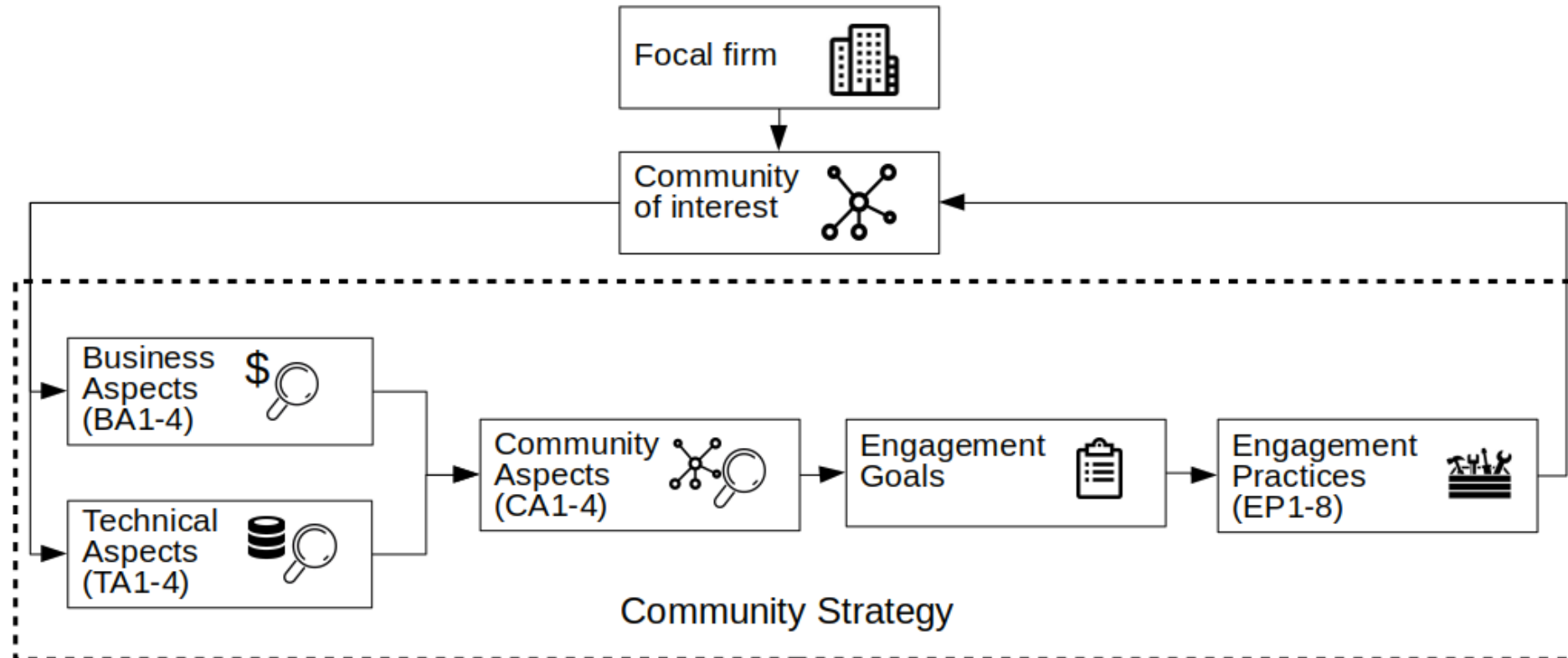
**Where?**  
Need for  
influence?



**What?**  
Engagement  
Goals?

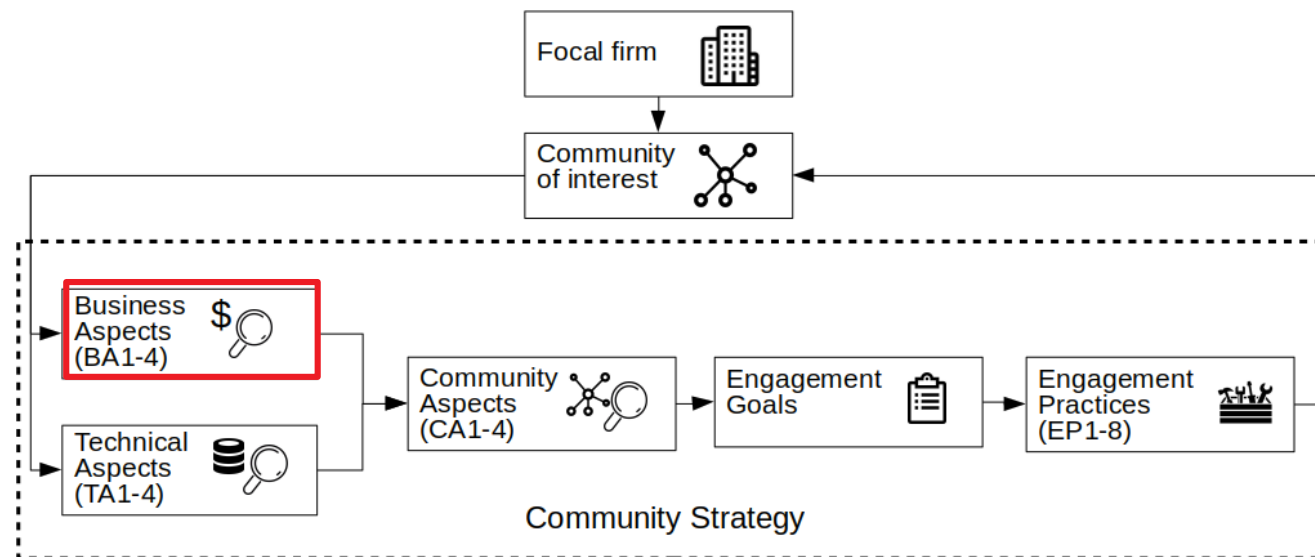
**How?**  
Engagement  
Plan?

# Community Strategy Framework



# Business Aspects

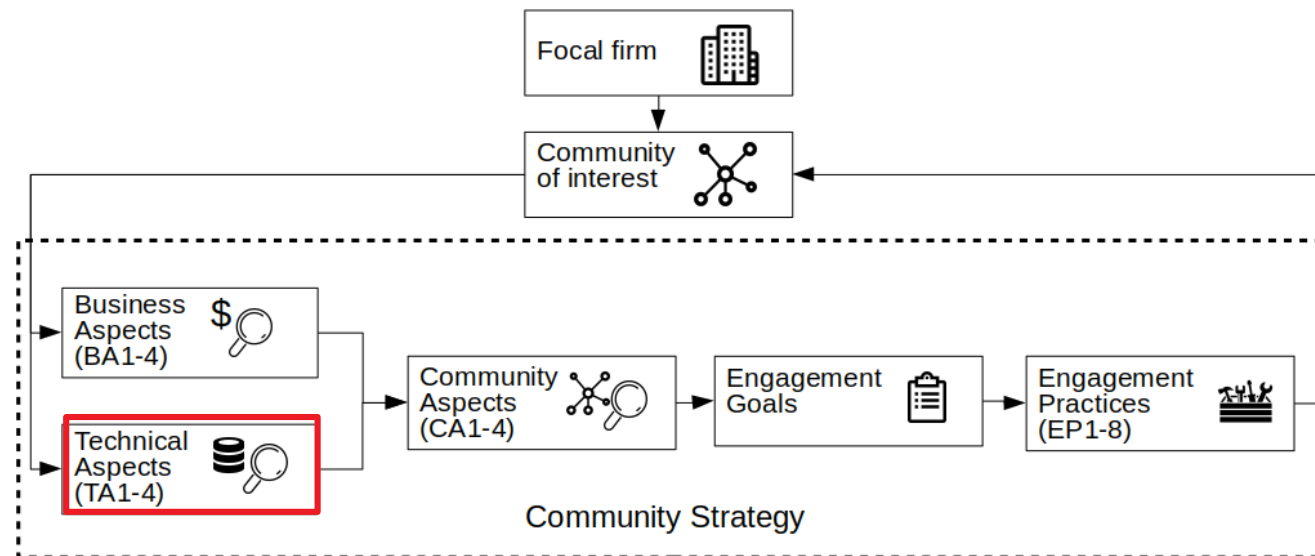
- Connection to business model
- Connection to business strategy
- Pool for recruitment
- Tool for marketing





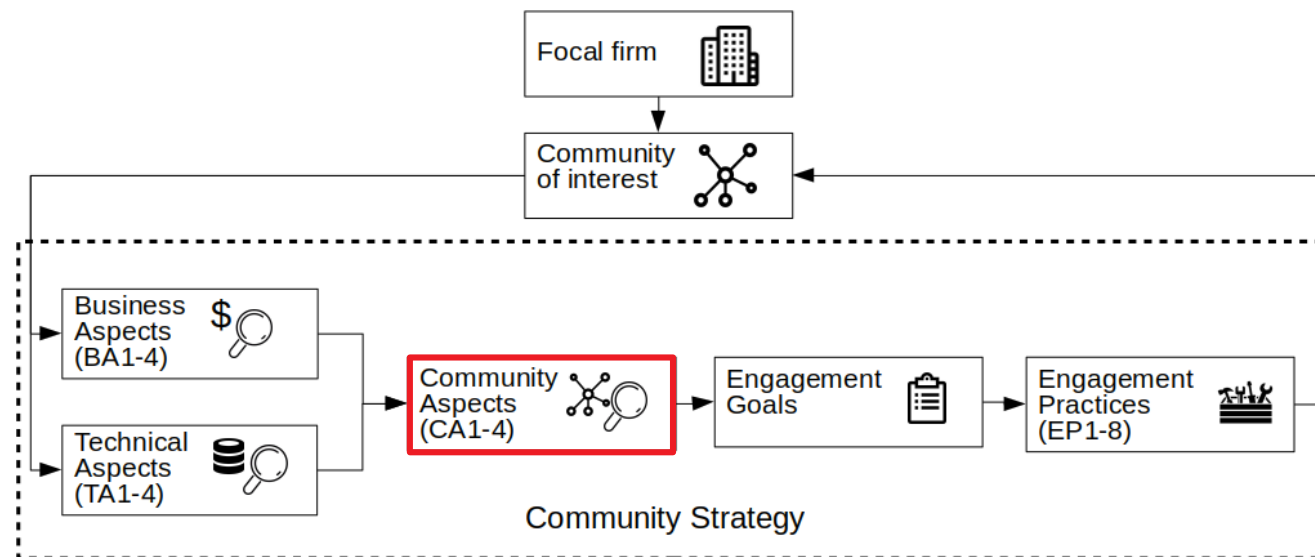
# Technical Aspects

- Internal dependencies and integrations
- Fitness-of-use
- Dependency on the OSS community's release planning
- Need for competence and resources of the OSS community



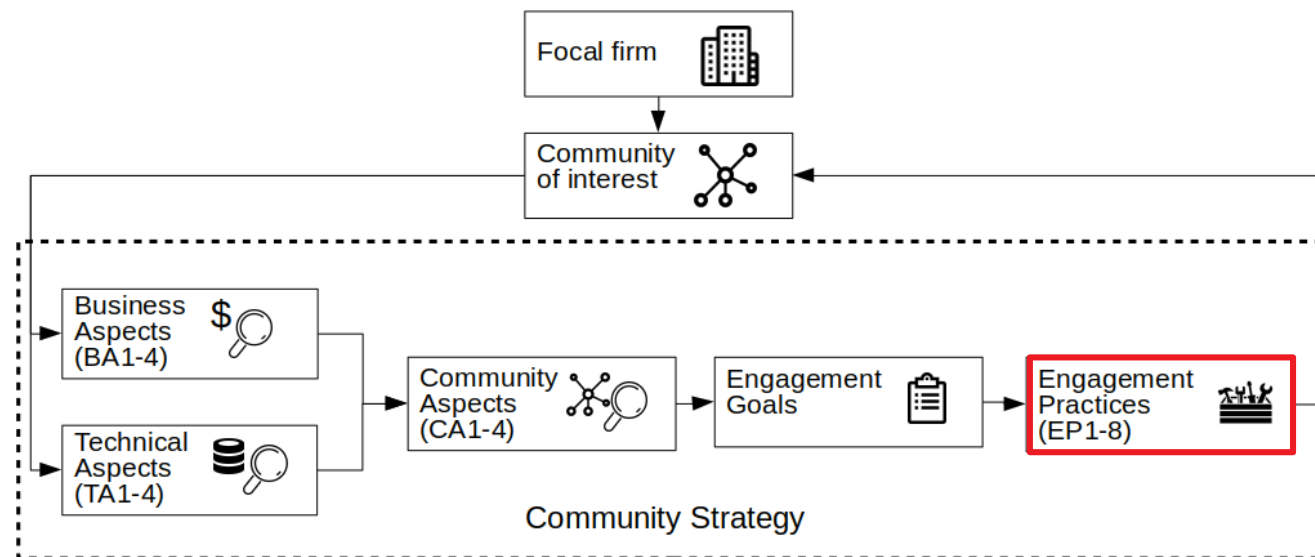
# Community Aspects

- Presence, influence and agenda of other stakeholders
- Diversity and activity
- Openness in culture and governance
- Ownership and management of the OSS project



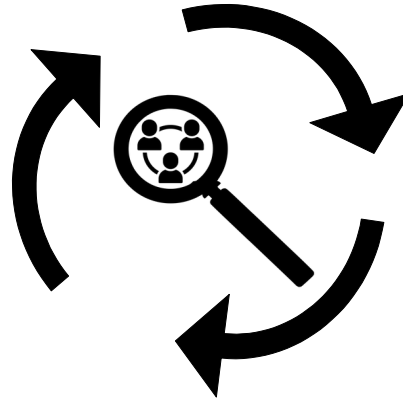
# Engagement Practices

- Understand the community, its culture and governance
- Contribute based on goals and resources
- Foundation membership, documentation writing, arranging hackathons, speaking at conferences, answering mailing lists...



# Stakeholder Influence Analysis

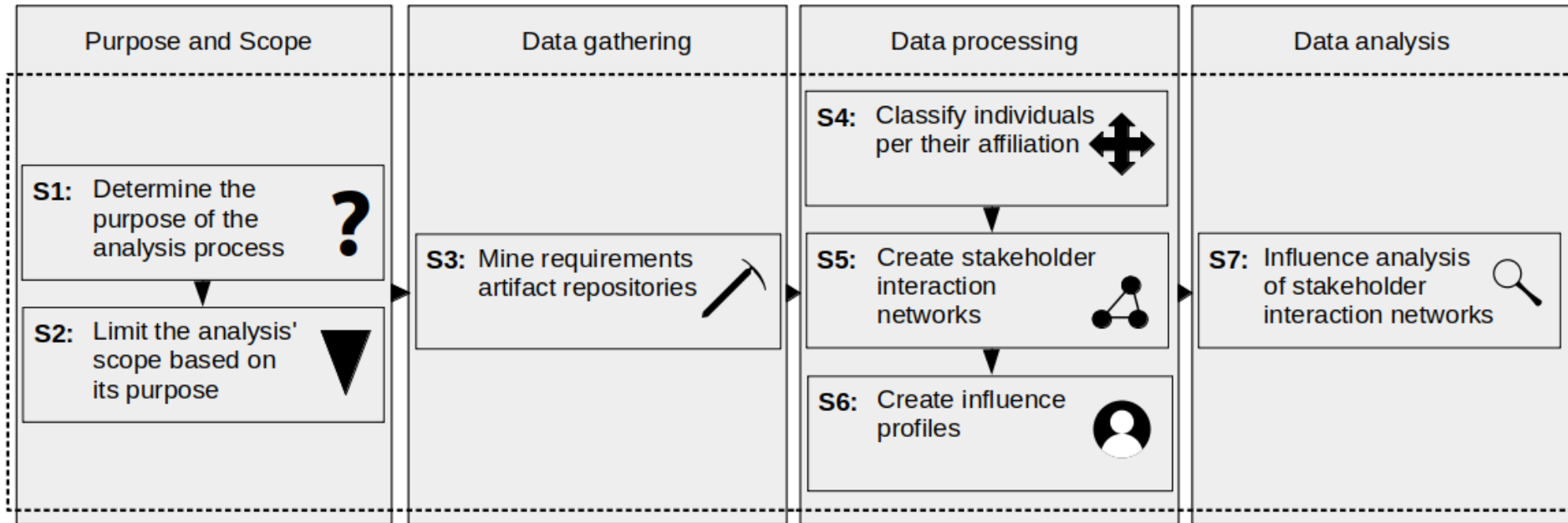
**Who?**  
Stakeholders  
present



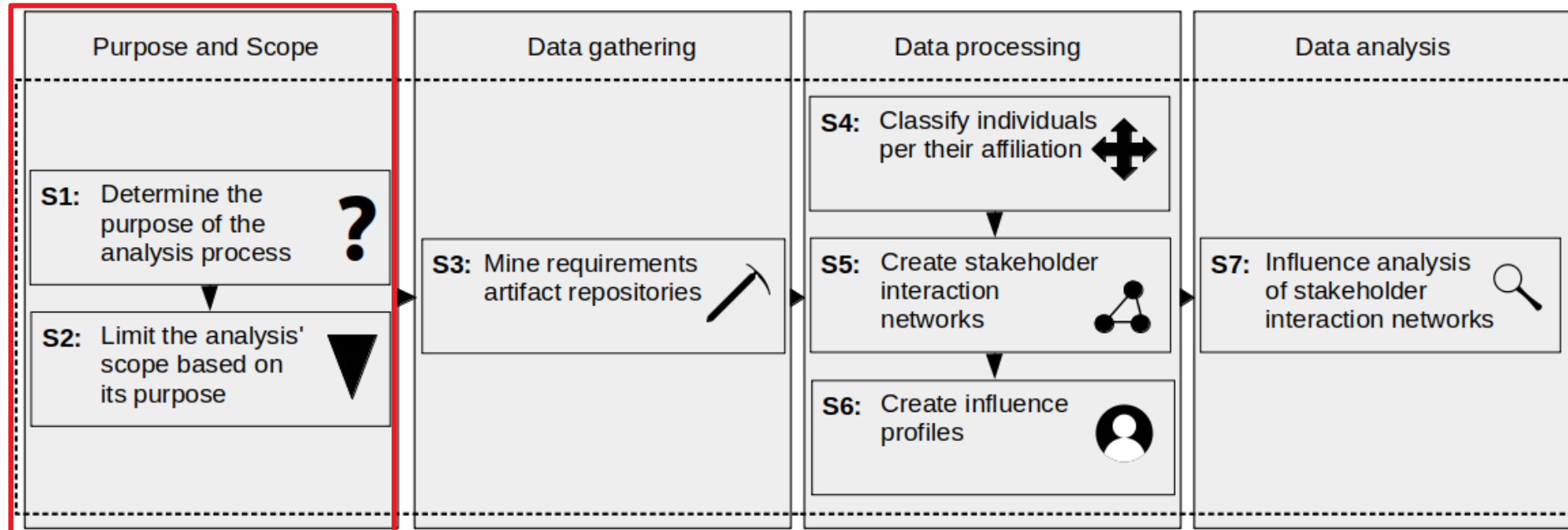
**How?**  
Stakeholders'  
influence

**What?**  
Stakeholders'  
agendas

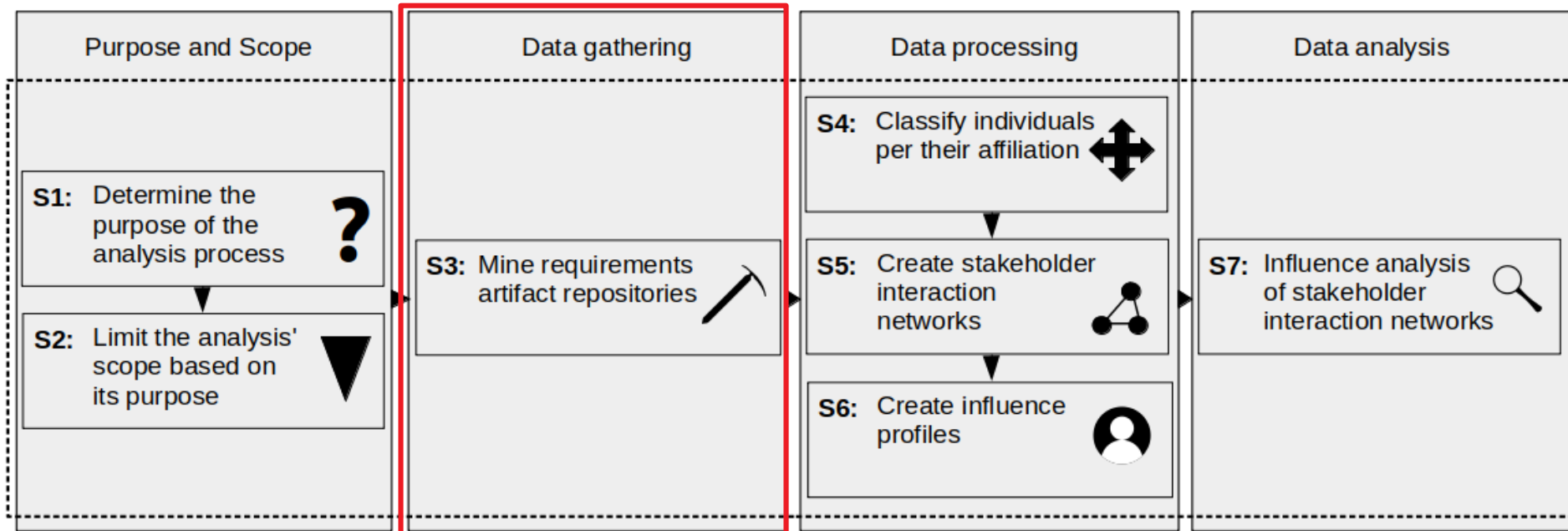
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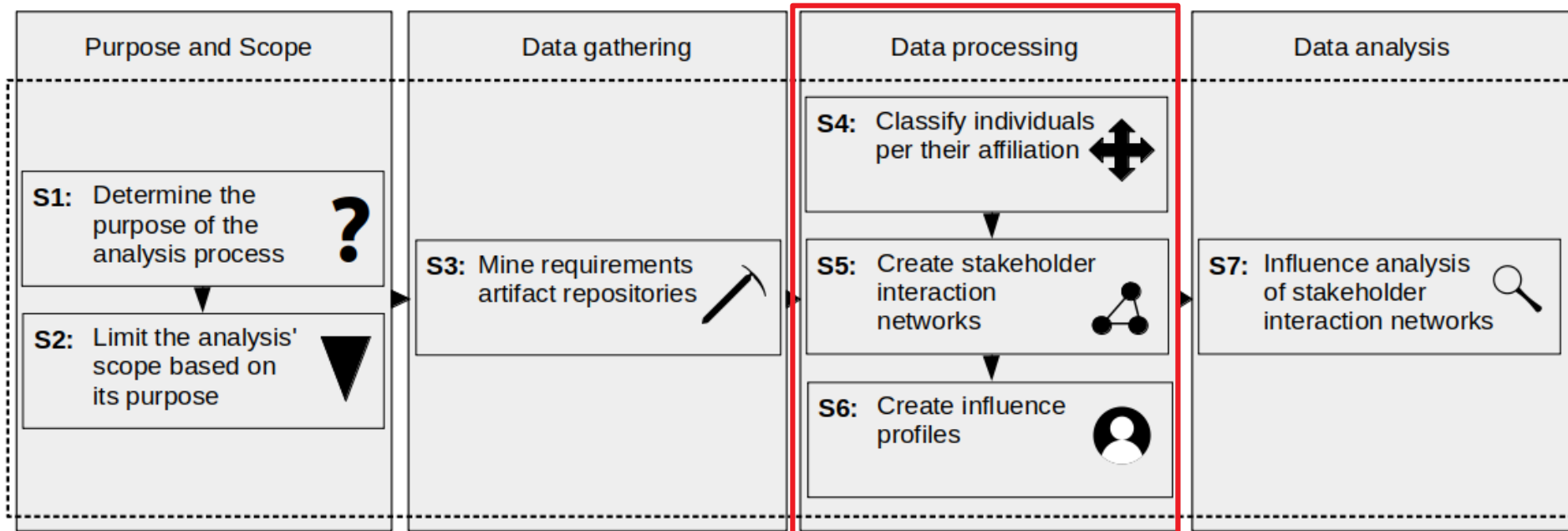
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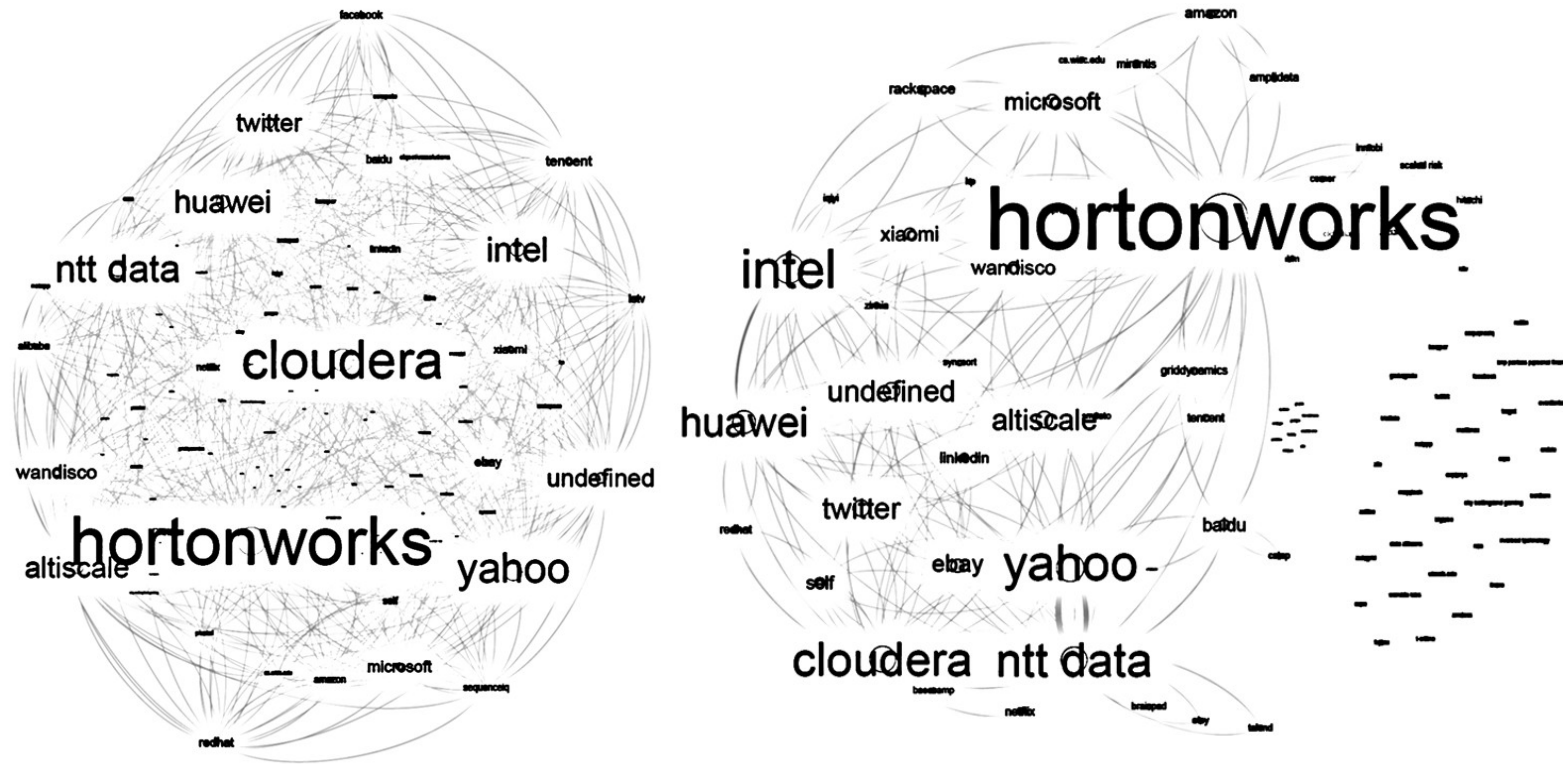


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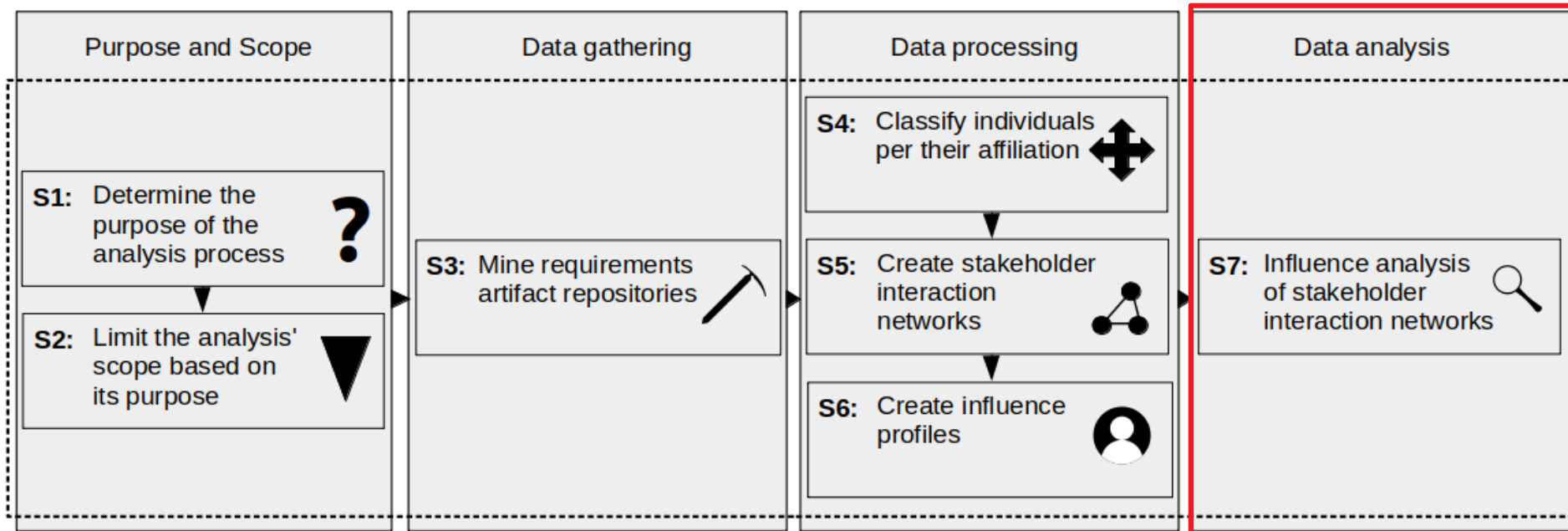




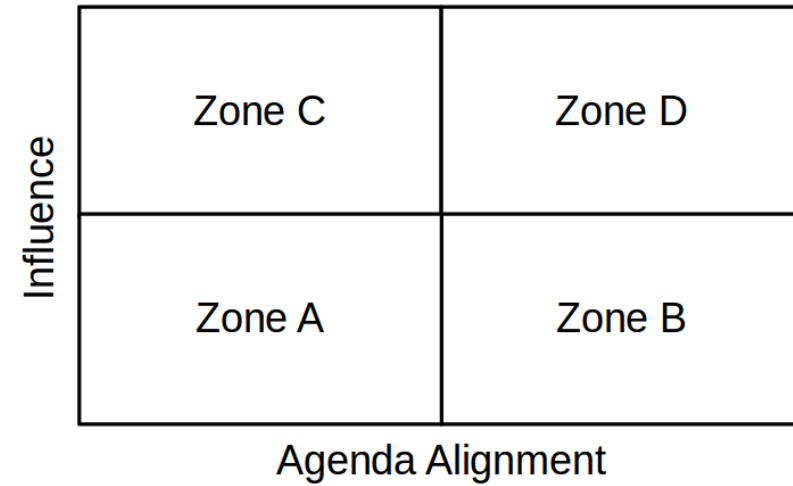
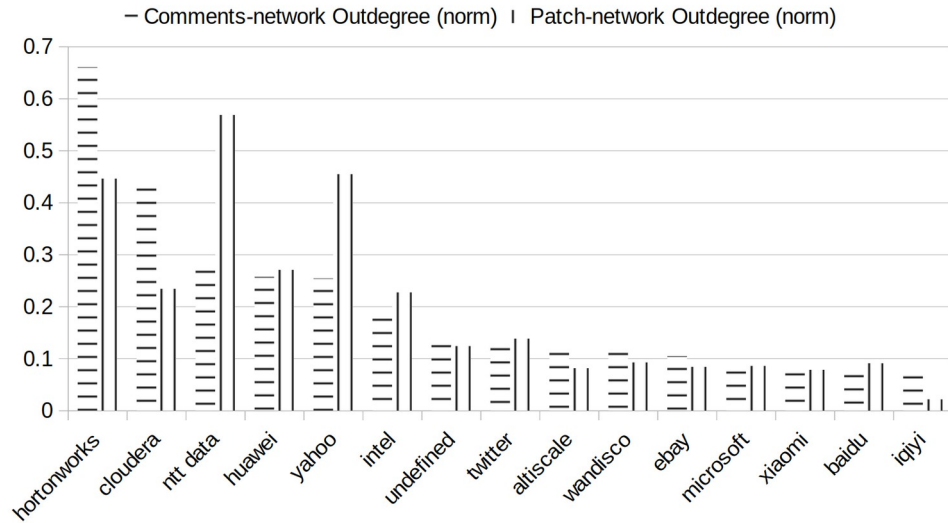
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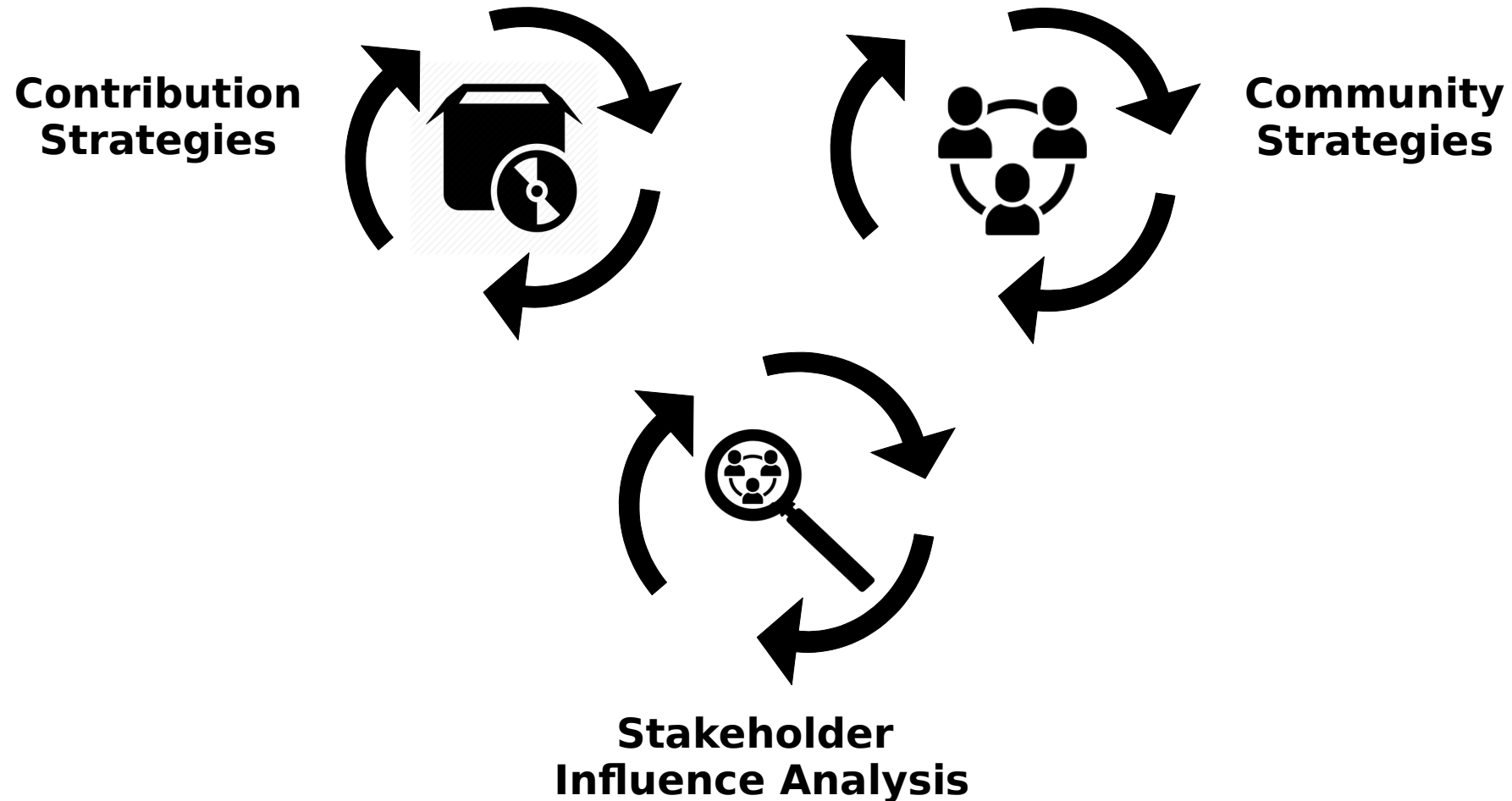
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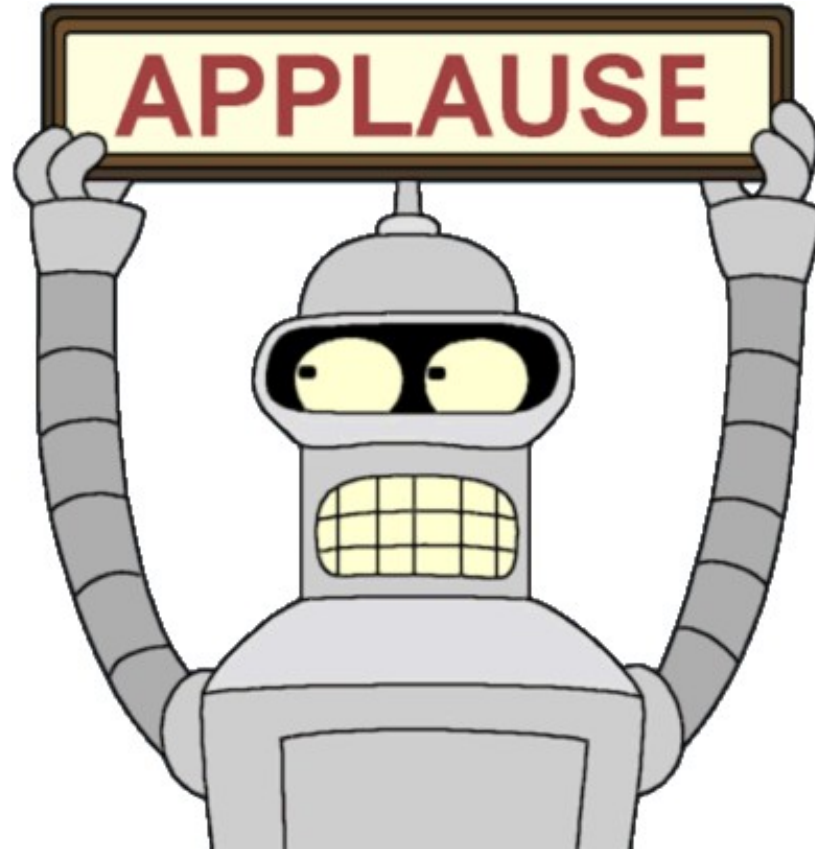
# Interactive and Iterative 3-way Approach



Thesis – including all papers

- [http://cs.lth.se/  
johan-linaker/doctoral-thesis/](http://cs.lth.se/johan-linaker/doctoral-thesis/)

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